What is RNA?

* Nucleic acid involved in putting the genetic code into action
* long chain of nucleotides
* base sequence from DNA copied into RNA and the latter directs production of proteins

Functions of RNA

* Involved only in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* It controls \_\_\_\_\_\_\_\_\_\_\_ of amino acids into proteins.

Messenger RNA (mRNA)

* They carry our information from \_\_\_\_\_\_\_\_\_\_\_\_\_ to other parts of the cell.

Ribosomal RNA (rRNA)

* They make up subunits of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ where the proteins are made.

Transfer RNA (tRNA)

* RNA transfers \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ to ribosome as it is specified by the codes in mRNA.

Review so Far:

* RNA is found in the \_\_\_\_\_\_\_\_\_\_\_. It is basically a \_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_ DNA copy that puts the DNA code to work making proteins. There are three kinds of RNA. mRNA—\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ RNA, tRNA—\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ RNA, rRNA—\_\_\_\_\_\_\_\_\_\_\_\_\_\_ RNA

Polypeptides

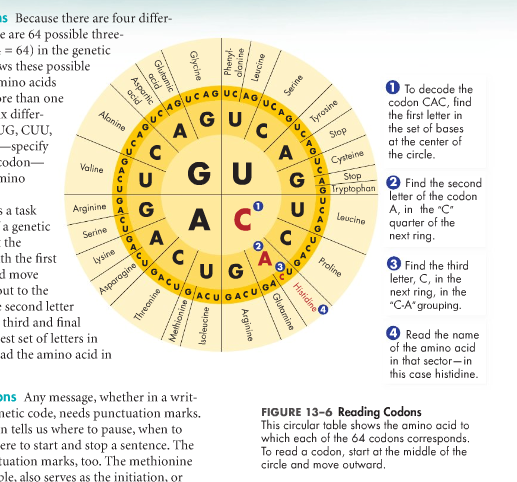
* proteins are made by \_\_\_\_\_\_\_\_\_\_\_\_ amino acids together into long chains.

Only certain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ make up certain amino acids. The order in which they are joined together determines properties of these different proteins.

Codons

* group of \_\_\_\_\_\_\_\_\_ nucleotide bases (A,U,C,G) in mRNA that specify a particular amino acid to be incorporated into a protein

In \_\_\_\_\_\_\_\_\_\_\_\_\_\_ genetic messages the DNA needs to be \_\_\_\_\_\_\_\_\_\_\_\_\_ into a strand of RNA. This then contains a code for making proteins.

* The \_\_\_\_\_\_\_\_\_\_ is determined by the order in which the amino acids are in and the function too.
* Genetic code- A, C, G, and U-instructs \_\_\_\_\_ different amino acids.
* The genetic code is read three letters at a time. **Each three-letter “\_\_\_\_\_\_” in mRNA is a codon. A condon has three bases that make up (or specify) a single amino acid so it will eventually be added to the polypeptide chain.**
* “64 possible three-base codons in RNA in this genetic code. However, almost all amino acids can be \_\_\_\_\_\_\_\_\_\_ by more then one codon.”
* The picture is of a genetic code table. To read this you start with the first letter in the middle of the codon and continue to go outward with the next letter into the second part of the diagram, then the last letter in the third ring and this will tell you one of the \_\_\_\_ amino acids that it specifies.
* Any polypeptide sequence will have the beginning which is the AUG condon (\_\_\_\_\_\_\_\_) however there are certain condons such as UGA, that will \_\_\_\_\_\_\_\_ or end the sequence of that specific polypeptide chain, which means it’s complete.

DNA vs. RNA

* Sugar
  + DNA: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + RNA: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* RNA is \_\_\_\_\_\_\_\_\_\_\_ stranded, DNA \_\_\_\_\_\_\_\_\_\_\_ stranded
* Bases
  + RNA: Adenine, \_\_\_\_\_\_\_\_\_\_, Cytosine, Guanine
  + DNA: Adenine, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, Cytosine, Guanine
* Roles
  + DNA: \_\_\_\_\_\_\_\_ codes for proteins
  + RNA: \_\_\_\_\_\_\_\_ codes into action